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High Performance Ceramics

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Message from the Guest Editors

High performance ceramics are usually developed because of their excellent behavior under high temperature of manufacturing and use. (i) the thermo-structural ceramics must exhibit resistance to oxidation and corrosion phenomenon, and/or thermo-mechanical performances at a high temperature; (ii) the protective/functional ceramics designed for special applications requiring electric, magnetic, or optical properties; (iii) functionally-graded ceramics showing a well-controlled architecture (i.e., a gradient composition and microstructural gradient). Several families of ceramics can then be targeted, namely: oxides, non-oxides, monoliths, composites, lamellar ceramics showing an anisotropic microstructure (e.g., MAX, MXENEs, and eutectic ceramic phases), and carbon-based materials.

Keywords

- ceramics
- performance
- high temperature
- corrosion
- oxidation
- functional
- property gradient
- simulation
- modelling

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Message from the Editor-in-Chief

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